Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Section 73.622(b)	)	Docket No. _____
DTV Table of Television Allotments	)	
(Juneau, Alaska)	)	

To: Chief, Video Services Division, Mass Media Bureau

PETITION FOR RULEMAKING

Capital Community Broadcasting, Inc. ("CCB"), license of ɔnco mercial educational Station KTOO-TV, NTSC Channel '3, Juneau, Alaska, through its attorneys, hereby petitions, pursuant to Section 73.622(a) of the Commission's rules, for amendment of Section 73.622(b), the DTV Table of Television Allotments, to substitute DTV Channel '1 0 for existing DTV Channel '6 at Juneau for use as the station's paired DTV channel. In support thereof, the following is respectfully shown:

1. CCB is the licensee of public television Station KTOO-TV on NTSC Channel '3 at Juneau. The DTV Table of Television Allotments pairs Station KTOO-TV with a DTV channel allotment on Channel *6. That allotment specifies a maximum effective radiated power (ERP) of 1 kW and an antenna radiation center height above average terrain (HAAT) of 33 meters. CCB holds a construction permit for a DTV station on Channel '6 at ERP of 0.748 kW at HAAT of minus 324 meters. CCB proposes the substitution of DTV Channel *1o for DTV Channel '6, with a maximum ERP of 0.748 kW at an antenna radiation center height above average terrain of minus 320.3 meters, using a omnidirectional antenna at the same geographical coordinates as the Channel '6 allotment.

2. Attached hereto is an Engineering Exhibit prepared by CCB's consulting engineers. As shown in that Engineering Exhibit, the proposed Channel '6 allotment will lead to a station that generates no interference and the proposal thus obviously meets the de minimis 2%/10% interference procedures outlined in the FCC's DTV Processing Guidelines. The proposal is within the Canadian border area and a technical showing is made that the proposal would not lead to interference to any Canadian station.

3. As explained in the Engineering Exhibit, the only other full-service television station in the Juneau area currently operates on Channel 8 and has been allotted DTV Channel 11, both in the higher portion *of* the VHF band. Operation of Station KTOO-DT on Channel '10 would permit area viewers to use more efficient and more compact dedicated high-band VHF antennas, rather than high-band/low-band antennas. Moreover, operation on Channel '6 would pose the prospect of interference with any future development of the reserved FM band in the area. The proposed Channel '10 allotment would pose no such interference. The Commission has recognized in designing the DTV table that "...the use of channel 6 for television service necessitates some limitations on stations in the noncommercial FM radio service." *Second Memorandum Opinion & Order on Reconsideration of the fifth & Sixth Report & Orders in MM Docket No. 87-268*, 14 FCC Rcd 1348, 1373 (1998). Moving CCB's DTV service away from Channel '6 would as a by-product eliminate that possible impediment to future services.

4. The proposed substitution of DTV Channel '10 for DTV Channel *6 fully complies with the applicable rules and will permit CCB to file a "checklist" application for modification of construction permit. Grant of the requested substitution of channels will permit

improved, interference-free DTV service in the public interest. Accordingly, we urge the Commission to issue a Notice of Proposed Rulemaking to substitute DTV Channel '10 for DTV Channel '6 at Juneau, Alaska. Pursuant to Section 1.401(d) of the rules, a draft Notice of Proposed Rule Making is attached,

Respectfully submitted,

CAPITAL COMMUNITY BROADCASTING, INC.

By: Lawrence M. Miller

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Its Attorneys

January 14, 2002

APPENDIX

1. Pursuant to authority found in Sections 4(i), 5(c)(1), 303(g) and (r), and 307(b) of the Communications Acl of 1934, as mended. and Sections 0.6 **1**,0.204(b) and 0.283 of the Commission's Rules, IT IS PROPOSED TO **AMEND** the DTV Tahlc of Allotments. Section 73.622(b) of the Commission's Rulcs and Regulations, as set forth in the Notice of Proposed Rule Making to which this Appendix is attached.

2. Showings Required. Comments *are* invited on the proposal(s) discussed in the Notice of Proposed Rule Making to which this Appendix is attached. Proponent(s) will he expected to answer whatever questions are presented in initial conunents. The proponent of a proposed allotment is also expected to file conunents even if it only resubmits or incorporates by reference its former pleadings. It should also restate its present intention to apply for the channel if it is allotted aid, if authorized, to build a station promptly. Failure to file may lead to denial of the request.

3. Cut-off protection. The following procedures will govern the consideration **of** filings in this proceeding.

(a) Counterproposals advanced in this proceeding itself will bc considered, if advanced in initial comments, so that parties may comment on them in reply comments. **Thcy** will not he considered if advanced in rcply comments. (See Section 1.420(d) of thc Commission's Rules).

(h) With respect to petitions for rule making which conflict with the proposals in this Notice, they will hc considered as comments in the proceeding, and Public Notice to this effect will be given as long as ihcy are filed before the date for filing initial comments herein. If ihcy are lilcd later than that, they will not be considered in connection with the decision in this docket.

(c) The filing of a counterproposal may lead thc Commission to allot a different channel than was requested liir any of the communities involved.

4. Comments and Reply Comments; Service. Pursuant to applicable procedures set out in Sections 1.415 and 1.420 of the Coinmission's Rules and Regulations, interested parties may file comments and reply comments on or before the dates set forth in the Notice of Proposed Rule Making to which this Appendix is attached. All submissions by parties io this proceeding or hy persons acting on behalf of **such** parties **must** be made in written comments, reply comments, or other appropriate pleadings. Comments shall be served on the petitioner by the person filing the comments. Reply comments shall be served on the person(s) who lilcd comments to which the reply is directed. Such comments and rcply comments shall he accompanied by a certificate of service. (See Section 1.420(a), (b) and (c) of the Commission's Rules.) Comments should be filed with ihc Secretary, Federal Communications Commission. Washington, D.C. 20554.

5. Number of Copies. In accordance with the provisions of Section 1.420 of the Commission's Rules and Regulations, an original and lour copies of all comments, rcply comments, pleadings, briefs,

or other documents shall be furnished the Commission.

6. Public Inspection of Filings. All filings made in this proceeding will hc available for examination by interested parties during regular business hours in the Commission's Reference Center (Room CY-A257) at its headquarters, 445 12th Street, S.W., Washington, D.C.

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. CODFREY OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC. TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH THE CAPITAL COMMUNITY BROADCASTING, INC. PETITION FOR RULE MAKING (PFRM) WHICH SEEKS AUTHORIZATION TO AMEND THE DTV TABLE OF ALLOTMENTS IN ORDER TO SUBSTITUTE THE PROPOSED DTV VHF CHANNEL 10 FOR THE ALLOTTED KTOO DTV VHF CHANNEL 6 AT THE LICENSED SITE LOCATED IN JUNEAU, ALASKA.

The firm Kessler and Gehman Associates, Inc has been retained by the Capital Community Broadcasting, Inc. Juneau, Alaska in order to prepare engineering studies to support ofthe KTOO-DT Petition for Rule Making (PFRM) which respectfully requests and seeks authorization for an amendment of the DTV Table of Allotments by substituting the proposed DTV VHF Channel 10 for the allotted DTV VHF Channel 6 at the licensed site located in Juneau, Alaska

NOTE: We have included a completed 340dtv application to be used as an exhibit for information purposes only.

Discussion

The Capital Community Broadcasting, Inc. is licensed to operate KTOO-TV on VHF, NTSC Channel 3 with a maximum ERP of 2.45 kW at an antenna height Radiation Center (RC) of 0.0 (derived from an actual negative value) meters Above Average Teriain (AAT) in the vicinity of Juneau, AK. According to the DTV Table of Allotments located in Table I of Appendix B in the *Sixth Report and Order* in MM Docket 87-268, FCC 97-115, adopted April 3, 1997, KTOO is allotted VHF, DTV Channel 6 at an antenna Height Above Average Terrain (HAAT) of 33.0 meters and an ERP of 10 kW in order to replicate their licensed VHF Channel 3 Grade B Contour.

The justification for this PFRM to change from DTV Cliannel 6 to DTV Channel 10 has to do with the band itself The only other station in the same market as KTOO-TV is KJUD-TV KJUD-TV is licensed to operate its NTSC station on Channel 8 and has been allotted DTV Channel 11. Thus, KJUD will operate in the high band regardless of whether they remain on the allotted DTV Channel 11 or revert back the licensed NTSC Channel 8. Therefore, KTOO does not want to be the only station operating in the low band and it would obviously be in the public's best interest to purchase a high band VHF antenna to receive the signal from both stations rather than a high/low band antenna which would not be as efficient and as compact Accordingly, KTOO respectfully requests to amend the DTV Table of Allotments in order to substitute the proposed DTV VHF high band Channel 10 for the allotted DTV VHF low band Channel 6.

Kessler and Gehman Associatcs, Inc (KCA) first conducted a detailed spacing study to determine whether DTV Channel 10 was available (Exhibit 13) The only negative finding had to do with the interference caused to KTOO's Channel 10 translator (KIOLS), but that was expected. Since everything appeared to be in order, KGA performed outgoing interference studies with KTOO-DT on DTV Cliannel 10. The results of the inteiference studies shall be discussed in subsequent paragraphs.

The objective of the enclosed DTV PFRM is to ainend the DTV Table of Allotments as follows: (1) substitute DTV Channel 10 for assigned DTV Channel 6, (2) change effective radiated power (ERP) from assigned 10 kW to 0.748 kW using a nondirectional antenna; and (3) change the antenna RC HAAT from the assigned 33.0 meters to -320.3 ineters (negative).

The Capital Community Broadcasting, Inc was granted a DTV Construction Permit (CP) for DTV Channel 6 (file number BPEDT-20000427ACM), requesting to operate KTOO-DT with an ERP of 0.748 kW at an antenna height RC of -323 7 meters AAT using a inondiiectional antenna Specifically, the Capital Community Broadcasting, Iiic requests authorization to substitute KTOO-DT Channel 10 in lieu of the KTOO-DT Channel 6 DTV CP, and take any other steps necessary that would enable KTOO to construct and ultimately operate its digital facilities on DTV Channel 10

Transmitter

It is proposed to mount a Dielectric model TF-2HT horizontally polarized, omnidirectional VHF, DTV antenna on the existing KTOO-TV support structure owned by the Capital Coinmunity Broadcasting, Inc. The antenna structure is registered with the FCC and has a registration number of 1046332. The proposed support structure is located on top of the United States Federal Building, 9th and Glacier Avenue, Juneau, Alaska. The proposed Dielectric antenna shall be top-mounted and will have an antenna height radiation center of 64 3 meters above ground level (ACL). Tlie antenna's highest point will extend to 66.3 meters ACL and the overall height of the structure will extend to 67.5 meters AGL as depicted in Exhibit 3's elevation view of the support structure.

Interference Studies

The initial interference studies were computed using a Pentium Pro, 1 GHz, 512-megabyte, Pentium III processor and the initial calculations were performed using V-Soft Coininunication's Probe II, professional signal piopagation software and interference studies program

The final Longley-Rice interference studies were perforined using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's TV Inteiference and Spacing Analysis software (See Exliibit 12)

The interference study software is in accordance with the standards established in the FCC Public Notice #3060-0841 pertaining to DTV studies and DTV application preparation dated August 10, 1998.

Initial spacing studies, which considered DTV allotments (ALLOT), DTV/NTSC licenses (LIC), DTV/NTSC construction permits (CP), DTV/NTSC applications (APP) and Class A/Class A-eligible low power television (LPTV) stations in the applicable areas surrounding Juneau, AK revealed that VHF Channel 10 was a possible option for the Capital Community Broadcasting, Inc. station. After the spacing studies were completed additional studies were conducted to verify that the proposed station met tlie principal community coverage requirements of §73.625(a) in the Federal Communications Commission's (FCC) rules. Exhibit 11 depicts the proposed KTOO-DT F(50,90) 36 dBuV/m noise limited contour and verifies that tlie proposed station's noise limited contour fully encompasses the assigned principal community of Juneau, AK. After it was deterinined that the principal community coverage requirement was met, we performed initial, followed by detailed, interference studies on all applicable surrounding stations using the terrain dependent Longley-Rice, point-to-point propagation algorithm detailed in the FCC's Office of Engineering and Technology Bulletin Number 69 (OET 69).

The initial interference studies predicted that the proposed KTOO-DT may cause interference to KJUD-DT (Exhibit 14) Exhibits 15 and 16 are initial studies showing interference froin all stations to

the KJUD-DT (CP) station without and with KTOO-DT respectively. Exhibit 15 shows that without KTOO-DT, populations of 0.0 people are receiving DTV only interference and the interference free population is 26,909. Exhibit 16 shows that with KTOO-DT, populations of 0.0 people are receiving DTV only interference and the interference free population is still 26,909 Therefore, the initial interference studies show that the proposed KTOO-DI' Cliannel 10 facility would cause [26,909 (IX free without KTOO-DT) – 26,909 (IX free with KTOO-DT) = 0.0] interference to a total of zero (0.0) people Exhibits 15 and 16 calculated tlie KJUD-DT (CP) baseline population to be 26,927. Therefore, the total amount of unique interference caused by the proposed KTOO-DT is [0.0/26,927] 0 0% ≤ 2 0% and thus, all requirements under the definition of *de minimis* have been met. Exhibit 16 concludes that the total inteiference caused to KJUD-DT (CP) froin all stations including KTOO-DT is [0.0/26,927] 0.0% ≤ 10% and thus, all requirements under the definition of the *10% de-minimis* standard have been met.

Again, Exhibit 12 is the final detailed Longley-Rice interference study which was performed using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's TV Interference and Spacing Analysis software The calculations in this study match the FCC's calculations exactly. As you can see, tlie proposed KTOO-DT Channel 10 would iiot cause or receive any unacceptable interference from any applicable surrounding station(s).

The interference studies depicted in Exliibit 12 did not take account for Canadian stations. As you can see on page 2, the proposed facility is 54.0 km from the Canadian border and is theiefore, within the Canadian coordination distance.

Section (§) 73 623(d)(2) of the FCC Rules deals with geographic spacing requirements to all DTV stations, allotments and analog TV stations As you can see from Exhibit 17, the closest applicable Canadian stations to the proposed KTOO-DT Channel 10 station is the Channel 11(o) NTSC station located in Whitehorse (Yukon Territory) and the Channel 10(o) NTSC station located in Stewart (British Columbia). The Channel 11 station 263 81 km from the proposed KTOO-DT facility and the Channel 10 station 375 83 kin fiom the proposed KTOO-DT facility §73.623(d)(2) states that the separation requirement for an adjacent Channel DTV station to analog TV station in Zone II inust not he between 1 1 liin and 125 km Since the proposed KTOO-DT Channel 10 station would be 263.81 km from the adjacent channel (11) Canadian station, the proposed KTOO facility would meet the separation requirement. $73 623(d)(2) also states that the separation requirement for a co-channel DTV station to analog TV station in Zone II must not be less than 273 6 km. Since the proposed KTOO-DT Channel 10 station would be 375 83 km from the co-channel (10) Canadian station, the proposed KTOO facility would meet the separation requirement. Therefore, the proposed KTOO-DT Channel 10 station would meet all separation requirements depicted in §73 623(d)(2).

Exhibit 17 also shows that the proposed KTOO-DT station would only be 1 06 km from the KJUD-DT Channel 11 facility (CP). KJUD-DT has a CP to operate at 3 2 kW while the KTOO-DT Channel 10 facility is proposed to operate at only 0.748 kW Exliibit 18 is a contour comparison map between the proposed KTOO-DT Channel 10 F(50,90) 36 0 dBuV/m noise limited contour and the KJUD-DT Channel 11 F(50,90) 36.0 dBuV/m noise limited contour. As you can see, the KJUD-DT noise limited contour completely encompasses the proposed KTOO-DT noise limited contour which further proves that no interference would exist to any Canadian stations. The logic here is that KJUD-DT already has a CP for its facilities and it obviously has already been coordinated with the Canadians. The KTOO-DT proposed station is only 1.06 kiii from the KJUD-DT site and has a smaller coverage area than

KJUD-DT. Therefore, the propose KTOO-DT facility would not introduce any new interference to any Channel 10 or 11 Canadian stations.

The last item to discuss with respect to Canadian coordination is the fact that the interference situation will actually improve with KTOO-DT changing from Channel 6 to Channel 10. As you can see from Exhibit 19, the KTOO-DT Channel 6 (CP) facility would actually be short-spaced with a Channel 6 Canadian station (Whitehorse, Yukon Territory) and we have already shown that the proposed KTOO-DT Channel 10 facility would not be short-spaced with any Canadian station. Therefore, the change in channels from 6 to 10 would actually improve the overall US-Canadian situation

Exhibits

Exhibits 1 and 2 represent KTOO-DT's administration data, antenna and antenna structure specifications

Exhibit 3 depicts the profile view of the proposed antenna on the antenna structure with all the appropriate elevations.

Exhibits 4 and 5 display the azimuth pattern and the azimuth pattern tabulation respectively.

Exhibits 6 and 7 display the elevation pattern and the elevation pattern tabulation respectively

Exhibits 8 and 9 display the ERP/dBk pattern and tabulation respectively

Exliibit 10 depicts the location of the proposed KTOO-DT Channel 10 site on a 7.5-Minute (Series) Topographic Map.

Exhibit 11 depicts the proposed KTOO-DT Channel 10 coverage contour, boundaries of the principal community to be served, and the proposed transmitting location with radials every 4.5".

Exhibit 12 is a detailed Longley-Rice interference study using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's TV Interference and Spacing Analysis software.

Exhibit 13 is adetailed Channel 10 spacing study

Exhibit 14 is an initial KTOO-DT Channel 10 outgoing interference study

Exhibit 15 is an initial KJUD-DT (CP) incoming interference study without KTOO-DT Channel 10

Exhibit 16 is an initial KJUD-DT(CP) incoming interference study with KTOO-DT Channel 10

Environmental Impact

The proposed construction will have no significant environmental impact as defined in §1.1307 of the FCC Rules. The DTV transmitter, 3-1/8 inch (SO-ohin) transmission line and antenna system will produce an ERP of 0.748 kW. Assuming that the maximum lobe of radiation is oriented at the base of the tower, it will produce a power density six feet above the ground of 0.0071 mW/cm^2. This is only 0.71% of the maximum permissible exposure (MPE) authorized by the American National Standards

Institurc **(ANSI).** Since Ihe proposed operation of KTOO-DT Channel 10 will not exceed 5.0% of the MPE limit for population/uncontrolled at any point **on** the ground, KTOO-DT is not considered to be a "significant contributor" **to** Ihc RF exposure environment pursuant **to** OET Bulletin h5, Edition 97-01.

Therefore, contributions of exposure from other sources were not accounted for in this analysis. It is safe to conclude that the emissions will be insignificant and well within the maximum allowable requirements.

If other antennas are placed on the tower in the future, the applicant will cooperate with those users hy reducing or completely terminating the power to the antenna when maintenance workers arc **in** danger from the electromagnetic radiation emanating from the antenna.

Certification

The applicant accepts lull responsibility lor the elimination of any objectionable intcrfercncc including that caused by intermodulation to facilities in existence or authorized prior to the grant of this application.

This technical statement was prepared by William T. Godfrey, Telecommunications Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working **in the** field of radio and television broadcast consulting since 1998. He graduated from the **University** of Norlh Florida with a Bachelor of Arts degree in Criminal Justice **and** a minor in Mathematics in 1993. **As a** Professional in the ticld of Telecommunications, he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.

KESSLER AND GEHMAN ASSOCIATES, INC.

WILLIAM T. GODFREY
Telecommunications Consultant

January 08, 2003

PETITION FOR RULE MAKING (PFRM) FOR THE DIGITAL TELEVISION BROADCAST STATION KTOO-DT TO OPERATE ON DTV CHANNEL 10 WITH AN ERP OF 0.748 KW AT AN ANTENNA HEIGHT RADIATION CENTER OF 64.3 METERS ABOVE GROUND LEVEL JUNEAU, ALASKA

(CAPITAL COMMUNITY BROADCASTING, INC.)

KESSLER AND GEHMAN ASSOCIATES, INC.
TELECOMMUNICATIONS CONSULTING ENGINEERS

20030107

Prepared by William T. Godfrey

507 N.W. 60th Street, Suite C
Gainesville, Florida 32607

Federal Communications Commission
Washington, D. C. 20554

Approved by OMB
3060-0034

FOR FCC USE ONLY

FCC 340

APPLICATION FOR CONSTRUCTION PERMIT FOR RESERVED CHANNEL NONCOMMERCIAL EDUCATIONAL BROADCAST STATION

FOR COMMISSION USE ONLY
FILE NO.

Section I - General Information

1. Legal Name of the Licensee/Permittee

CAPITAL COMMUNITY BROADCASTING, INC.

Mailing Address

360 EGAN DRIVE

City JUNEAU | State or Country (if foreign address) AK | ZIP Code 99801

Telephone Number (include area code) 907-586-1670 | E-Mail Address (if available) ktoo@juneau.com

Call Sign KTOO | Facility Identifier 8650

2. Contact Representative (if other than licensee/permittee) WILLIAM T. GODFREY | Firm or Company Name KESSLER AND GEHMAN ASSOCIATES, INC.

Telephone Number (include area code) 352-332-3157 | E-Mail Address (if available) godfreyw@bellsouth.net

3. Is this application being filed in response to a window? ☐ Yes ☒ No

If Yes, specify closing date and/or window number: _____

4. **Application Purpose.**

☐ New station
☐ Major Change in licensed facility
☐ Minor Change in licensed facility
☐ Major Modification of construction permit
☐ Minor Modification of construction permit
☐ Major Amendment to pending application
☐ Minor Amendment to pending application

a. File number of original construction permit: _____ ☐ N/A

b. Service Type: ☐ FM ☐ TV ☒ DTV

c. Community of License: City JUNEAU | State AK

d. Facility Type: ☒ Main ☐ Auxiliary

If an amendment, **submit as an Exhibit** a listing by Section and Question Number of the portions of the pending application that are being revised. Exhibit No. N/A

SECTION VII- DTV Engineering

Complete Questions 1-5 of the Certification Checklist and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.

Certification Checklist: A correct answer of "Yes" to all of the questions below will ensure an expeditious grant of a construction permit. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:

   (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622. ☐ Yes ☒ No

   (b) It will operate from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622. ☒ Yes ☐ No

   (c) It will operate with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622. ☒ Yes ☐ No

2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. ☒ Yes ☐ No

   Applicant must **submit the Exhibit** called for in Item 13.

3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community. ☒ Yes ☐ No

4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable. ☒ Yes ☐ No

5. The antenna structure to be used by this facility has been registered by the Commission and will not require reregistration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. ☒ Yes ☐ No

SECTION VII - DTV Engineering

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1. Channel Number: DTV 10 Analog TV, if any 3

2. Zone: ☐ I ☒ II ☐ III

3. Antenna Location Coordinates: (NAD 27)

58 ° 18 ' 04 " ☒ N ☐ S Latitude

134 ° 25 ' 21 " ☐ E ☒ W Longitude

4. Antenna Structure Registration Number: 1046332

☐ Not applicable ☐ FAA Notification Filed with FAA

5. Antenna Location Site Elevation Above Mean Sea Level: 14.7 meters

6. *Overall Tower Height Above Ground Level:* 67.5 meters

7. Height of Radiation Center Above Ground Level: 64.3 meters

8. Height of Radiation Center Above Average Terrain: -320.3 meters

9. Maximum Effective Radiated Power (average power): 0.748 kW

10. Antenna Specifications:

a.

Manufacturer	Model
DIELECTRIC	TF-2HT

b. Electrical Beam Tilt: _____ degrees ☒ Not Applicable

c. Mechanical Beam Tilt: _____ degrees toward azimuth _____ degrees True ☒ Not Applicable

Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(e). Exhibit No. 1 - 9

d. Polorization: ☒ Horizontal ☐ Circular ☐ Elliptical

TECH BOX

e. Directional Antenna Relative Field Values: [X] Not applicable (Nondirectional)

Rotation: _____ ° [ ] No rotation

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

If a directional antenna is proposed, the requirements of 47 C.F.R. Section 73.625(c) must be satisfied. **Exhibit required.**

Exhibit No. N/A

11. Does the proposed facility satisfy the interference protection provisions of 47 C.F.R. Section 73.623(a)? (Applicable only if **Certification Checklist** Items I(a), (b), or (c) are answered "No.") [X] Yes [ ] No

If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.

Exhibit No. N/A

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefor. (Applicable only if **Certification Checklist** Item 3 is answered "No.")

Exhibit No. N/A

13. **Environmental Protection Act. Submit in an Exhibit** the following:

Exhibit No. See Eng Statement

a. If **Certification Checklist** Item 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.

By checking "Yes" to **Certification Checklist** Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

If **Certification Checklist** Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R. Section 1.1311.

PREPARER'S CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.

Section VII -- Preparer's Certification

I certify that I have prepared Section VII (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name WILLIAM T. GODFREY	Relationship to Applicant (e.g., Consulting Engineer) CONSULTING ENGINEER	
Signature	Date JANUARY 08, 2003	
Mailing Address 507 NW 60TH STREET, SUITE C		
City GAINESVILLE	State or Country (if foreign address) FL	ZIP Code 32607-2702
Telephone Number (include area code) 352-332-3157	E-Mail Address (if available) godfreyw@bellsouth.net	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

KTOO-DT PFRM
JUNEAU, ALASKA

ENGINEERING SPECIFICATIONS

A. ***Transmitter Site:***
Geographic coordinates determined by licensed surveyor: **NAD27**

North Latitude	**58° 18' 04"**
West Longitude	**1340 25' 21"**

Transmitter Site Address: **United States Federal Building, 9th and Glacier Avenue, Juneau, Alaska.**

B. ***Main Studio Site Adress:*** **360 Egan Dr Juneau. AK 99801.**

C. ***Proposed Facility:***

DTV Channel	Number	**10**
	Frcqucncy	**192-198 MHz**

D. ***Antenna Height:***

Hcight of Site Above Mean Sea Lcvcl (AMSL)	**14.7 M**
Overall Height of Structure Above Ground (including all appurtenances)	**67.5 M**
Overall Height of Structure Abovc Mean Sea Levc! (including all appurtenances)	**82.2. M**
Antenna Height Radiation Center (R/C) **Above** Ground	**64.3 M**
Antenna Height R/C Above Mean Sea Level	**79.0 M**
Average of All Non-Odd Radials	**399.3 M**
Antenna Height R/C **Above** Average Terrain	**-320.3 M**

E. ***System Parameter, – Horizontal Polarization:***

Transmitter Power Required	**0.39 kW**
Maximum Power Input to Antenna	**0.34 kW**
Total System Loss	**0.63 dB**
Transmission Line Efficiency	**86.5%**
Maximum Antenna Gain in Beam Maximum	**3.42 dB**
Maximum Antenna Gain in Horizontal Plane	**3.42 dB**
Maximum Effective Radiated Power In Beam Maximum	**-1.26 dBk** **0.748 kW**
Maximum Effective Radiated **Power** In Horizontal Plane	**-1.26 dBk** **0.748 kW**

KTOO-DT PFRM
JUNEAU, ALASKA

DATA FOR PROPOSED DTV OMNIDIRECTIONAL TRANSMITTING ANTENNA

A ***Antenna:*** Dielectric TF-2HT, Horizontally Polarized, Omnidirectional, DTV Antenna.

B. ***Electrical Beam Tilt:*** 0.0°

C ***Mechanical Beam Tilt:*** None.

D. ***Maximum Power Gain*** **Horizontal Polarization**

Maximum:	2.2 (3.42 dB)
Horizontal:	2.2 (3.42 dB)

E. ***Length:*** 16.0 feet (4.9 meters) not including appurtenances.

F. ***Average Power DTV:*** 0.39 kW

G ***Null Fill:*** 0.0%

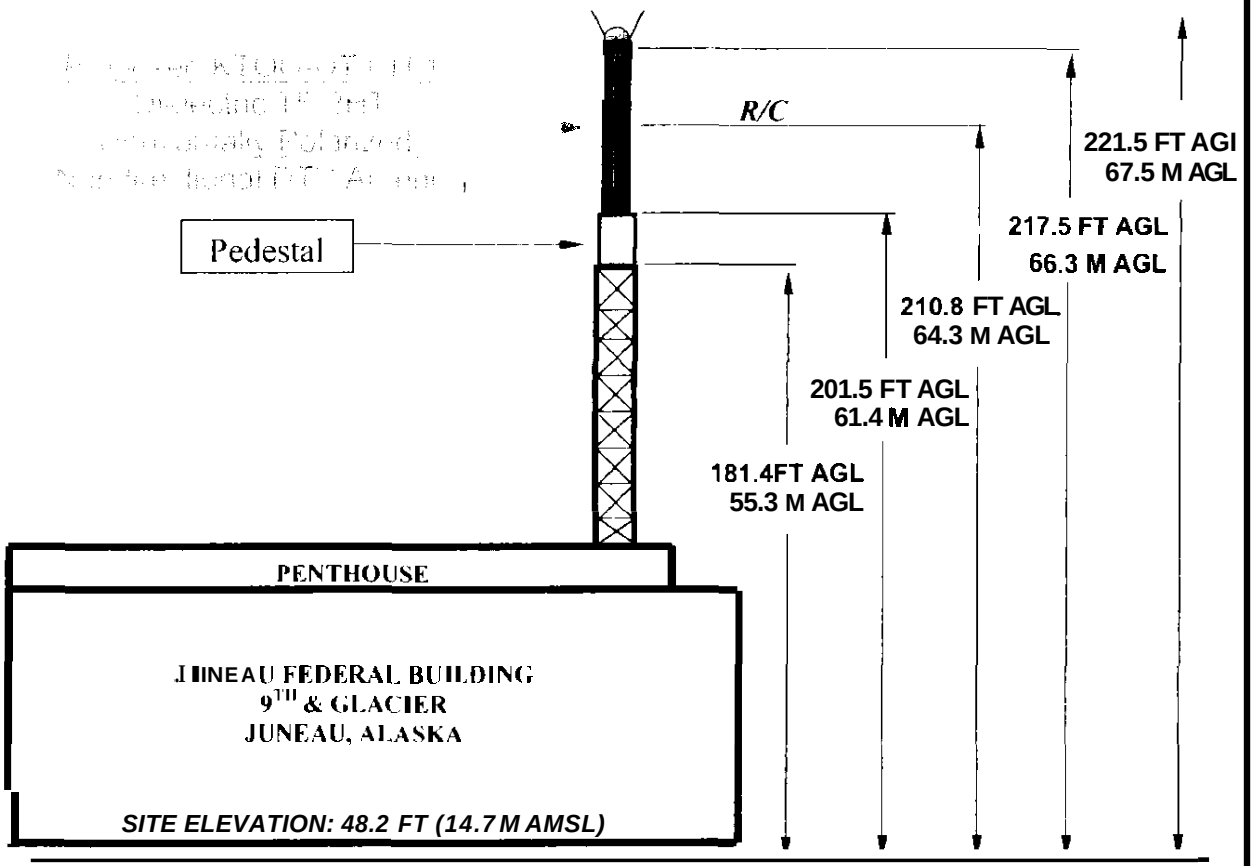
H. ***Transmission Line:*** 3-1/8" 50-ohm

I. ***Transmission Line Loss:*** 0.21 dB/100-feet

J. ***Total Transmission Line:*** 300 feet

K. ***Transmission Line Attenuation:*** 0.63 dB

ANTENNA STRUCTURE ELEVATION VIEW



OVERALL HEIGHT AGL:	67.5	M
OVERALL HEIGHT AMSL:	82.2	M
RADIATION CENTER AGL:	64.3	M
RADIATION CENTER AMSL:	79.0	M
RADIATION CENTER HAAT:	-320.3	M
AVG OF ALL NON-ODD RADIALS:	399.3	M

COORDINATES (NAD 27):

N. LATITUDE 58" 18' 04"

W. LONGITUDE 134" 25' *21"*

Antenna Structure Registration Number:
1046332

NOTE: NOT TO SCALE

KESSLER & GEHMAN
TELECOMMUNICATIONS CONSULTING ENGINEERS
507 N.W. 60th Street, Suite C
Gainesville, Florida 32607

KTOO-DT CHANNEL 10 PFRM

JUNEAU, ALASKA

20030107

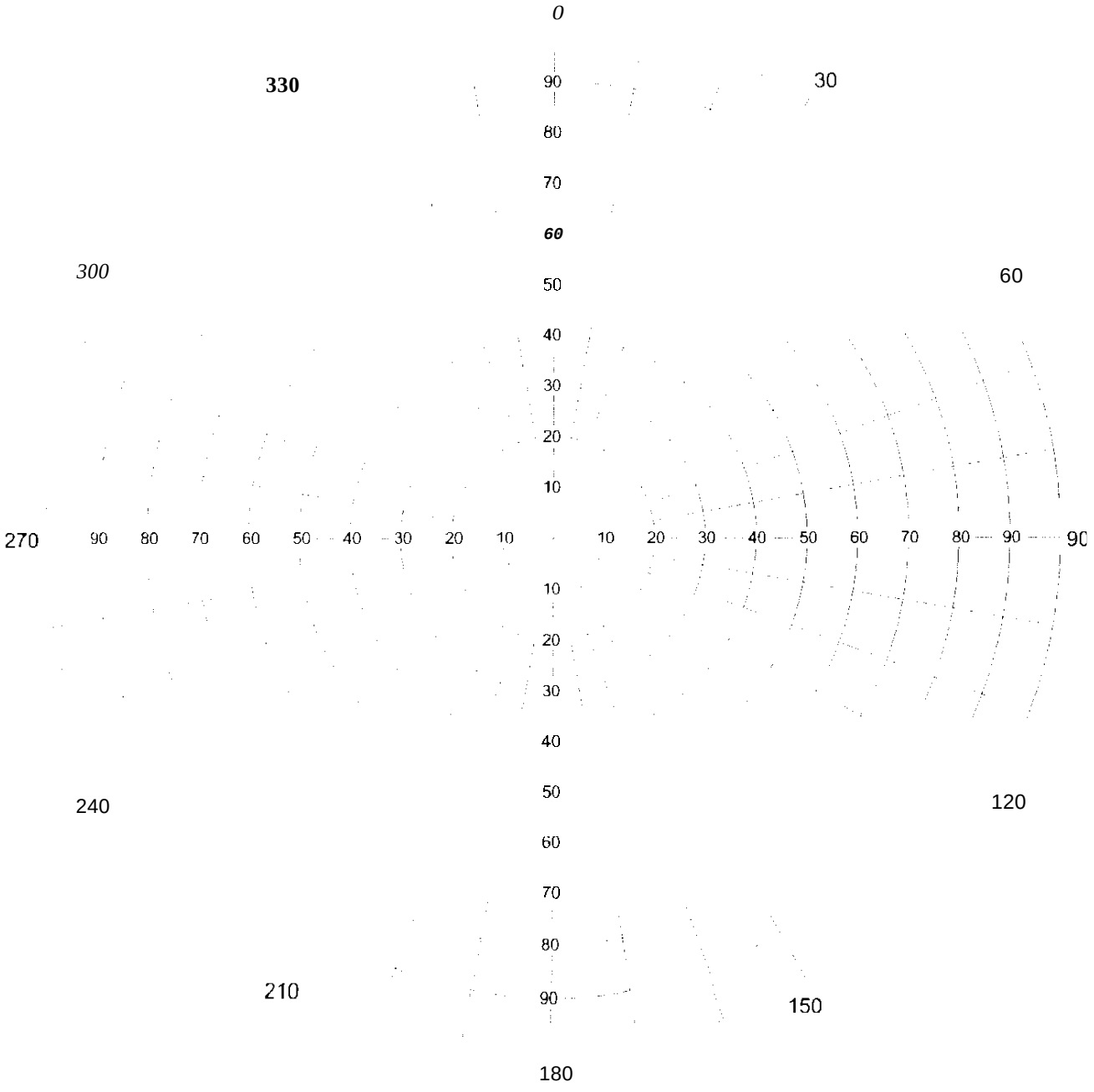
EXHIBIT 3

Exhibil No
Exhibit 4

Date	**07 Jan 2003**
Call Lelters	**KTOO-DT** Channel **10**
Location	**JUNEAU, ALASKA**
Customer	**Cap Comm Brdcst Inc.**
Anlenna Type	**TF-2HT**

AZIMUTH PATTERN

Gain	**1.20 (0.79 dB)**	Frequency	**195 MHz**
Calculated / Measured	**Calculated**	Drawing #	**TF-O**



Remarks

Exhibil 4

Exhibil No
Exhibit 5

Date 07 Jan **2003**
Call Letters KTOO-DT Channel **10**
Location JUNEAU, ALASKA
Customer **Cap** Comm Brdcst Inc.
Antenna Type **TF-2HT**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing# **TF-O**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	1.000	45	0798	90	1000	135	0798	180	1.000	225	0.798	270	1.000	315	0.798
1	0.999	46	0801	91	0999	136	0801	181	0.999	226	0.801	271	0999	316	0.801
2	0.998	47	0804	92	0998	137	0 804	182	0998	227	0.804	272	0.998	317	0.804
3	0.996	48	0.807	93	0996	138	0 807	183	0.996	228	0.807	273	0.996	318	0.807
4	0.994	49	0811	94	0.994	139	0811	184	0.994	229	0.811	274	0.994	319	0.811
5	0 990	50	0.815	95	0.990	140	0.815	185	0990	230	0815	275	0.990	320	0815
6	0 987	51	0.820	96	0987	141	0,820	186	0.987	231	0.820	4276	0.987	321	0.820
7	0.982	52	0.825	97	0.982	142	0.825	187	0.982	232	0.825	277	0.982	322	0.825
8	0 978	53	0.830	98	0.978	143	0.830	188	0 978	233	0 830	278	0.978	323	0.830
9	0972	54	0836	99	0972	144	0836	189	0972	234	0.836	279	0.972	324	0.836
10	0967	55	0842	100	0967	145	0.842	190	0.967	235	0.842	280	0 967	325	0.842
11	0961	56	0848	101	0961	146	0.848	191	0.961	236	0.848	281	0.961	326	0.848
12	0954	57	0854	102	0954	147	0.854	192	0.954	237	0 854	282	0.954	327	0.854
13	0948	58	0861	103	0948	148	0 861	193	0.948	238	0.861	283	0.948	328	0.861
14	0941	59	0867	104	0941	149	0.867	194	0.941	239	0.867	284	0.941	329	0.867
15	0934	60	0874	105	0934	150	0874	195	0.934	240	0.874	285	0.934	330	0.874
16	0926	61	0881	106	0926	151	0.881	196	0.926	241	0.881	286	0.926	331	0.881
17	0919	62	0888	107	0919	152	0.888	1197	0.919	242	0.888	287	0.919	332	0888
18	0911	63	0895	108	0911	153	0895	198	0911	243	0895	288	0.911	333	0.895
19	0904	64	0901	109	0 904	154	0901	199	0904	244	0901	289	0.904	334	0.901
20	0896	65	0908	110	0.896	155	0.908	200	0.896	245	0.908	290	0.896	335	0.908
21	OR89	66	0.915	111	0.889	156	0.915	201	0.889	246	0.915	291	0.889	336	0.915
22	0881	67	0921	112	0.881	157	0.921	202	0.881	247	0.921	292	0.881	337	0.921
23	0873	68	0928	113	0873	158	0.928	203	0873	248	0.928	293	0.873	338	0 928
24	0866	69	0934	114	0866	159	0.934	204	0.866	249	0.934	294	0.866	339	0 934
25	0859	70	0940	115	0859	160	0.940	205	0.859	250	0940	295	0.859	340	0 940
26	0852	71	0946	116	0852	161	0 946	206	0.852	251	0.946	296	0.852	341	0 946
27	0845	72	0952	117	0845	162	0.952	207	0.845	252	0.952	297	0.845	342	0.952
28	0.839	73	0957	118	0839	163	0.957	208	0.839	253	0.957	298	0839	343	0 957
29	0832	74	0962	119	0832	164	0962	209	0832	254	0.962	299	0.832	344	0 962
30	0827	75	0967	120	0827	165	0967	210	0827	255	0.967	300	0.827	345	0 967
31	0821	76	0971	121	0821	166	0971	211	0821	256	0971	301	0.821	346	0 971
32	0816	77	0976	122	0816	167	0976	212	0816	257	0 976	302	0 816	347	0 976
33	0812	78	0 980	123	0.812	168	0980	213	0812	258	0.980	303	0 812	348	0 980
34	0808	79	0 983	124	0.808	169	0 983	214	0 808	259	0.983	304	0808	349	0 983
35	0804	80	0 986	125	0.804	170	0986	215	0804	260	0.986	305	0 804	350	0 986
36	0801	81	0 989	126	0.801	171	0989	216	0801	261	0.989	306	0.801	351	0 989
37	0 798	82	0 992	127	0.798	172	0992	217	0798	262	0.992	(307	0.798	352	0.992
38	0796	83	0 994	128	0.796	173	0 994	218	0.796	263	0.994	308	0.796	353	0.994
39	0795	84	0 996	129	0.795	174	0 996	219	0.795	264	0.996	309	0.795	354	0.996
40	0794	85	0.997	130	0.794	175	0.997	220	0.794	265	0.997	310	0.794	355	0.997
41	0 794	86	0.999	131	0794	176	0 999	221	0.794	266	0.999	311	0 794	356	0.999
42	0794	87	0 999	132	0.794	177	0999	222	0.794	267	0 999	312	0.794	357	0.999
43	0795	88	1.000	133	0795	178	1000	223	0.795	268	1.000	313	0.795	358	1.000
44	0796	89	1 000	134	0 796	179	1000	224	0.796	269	1.000	314	0.796	359	1.000

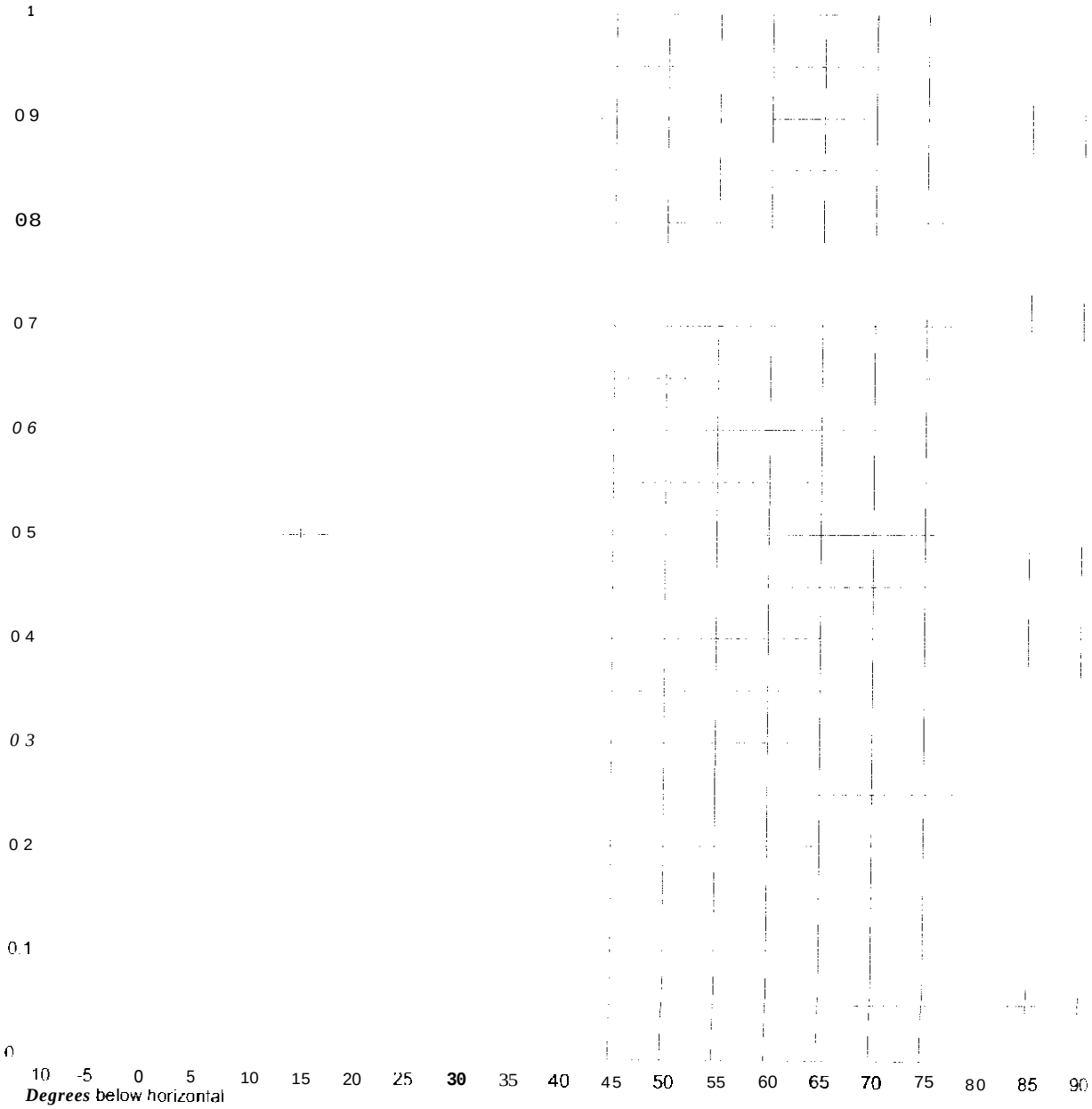
Remark

Exhibil No
Exhibit6

Dale	**07 Jan 2003**		
Call Lellers	**KTOO-DT**	Channel	**10**
Location	**JUNEAU, ALASKA**		
Customer	**Cap Comm Brdcst Inc.**		
Antenna Type	**TF-2HT**		

ELEVATION PATTERN

RMS Gain at Main Lobe	**2.2 (3.42 dB)**	Beam Tilt	**0.00 Degrees**
RMS Gain at Horizontal	**2.2 (3.42 dB)**	Frequency	**195.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**02S022000-90**



Remarks

Exhibil 6

Exhibil No
Exhibit 7

Dale	07 Jan 2003
Call Lellers	KTOO-DT Channel 10
Location	JUNEAU, ALASKA
Customer	Cap Comm Brdcst Inc.
Antenna Type	TF-2HT

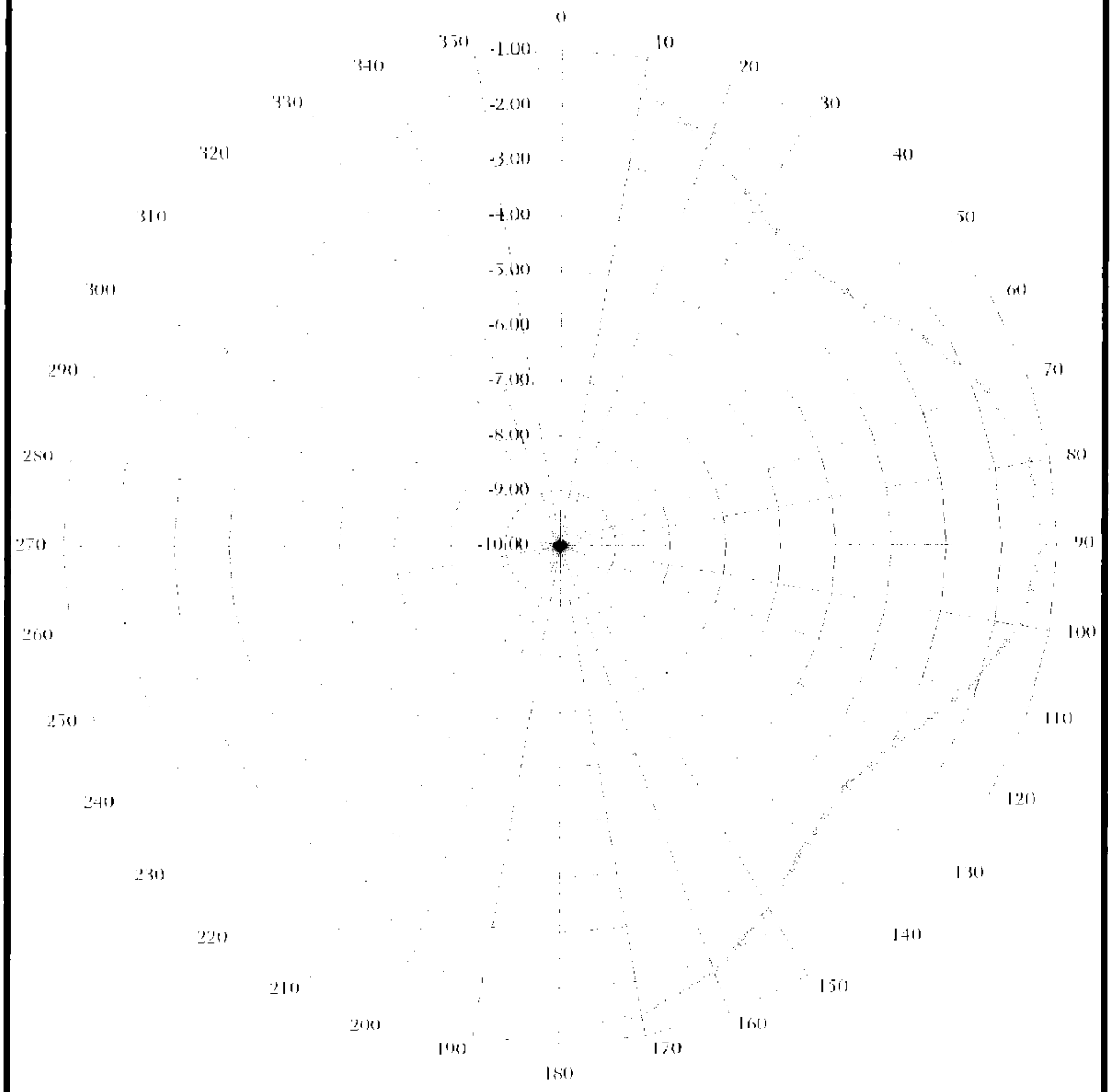
TABULATION OF ELEVATION PATTERN

Elevalion Pattern Drawing # **02S022000-90**

Angle	Field	Angle	Field	Angle	Field	Angle,	Field	'Angle	Field	Angle	Field
-100	0800	24	0988	106	0,777	30.5	0.135	51.0	0.356	71.5	0.100
-9.5	0819	26	0986	108	0.770	31 0	0.152	51 5	0.351	72.0	0094
-90	0836	28	0983	11 0	0.762	'31.5	0.169	52.0'	0.346	72.5'	0.089
-85	0853	30	0981	11 5	0 741	32 0	0 185	52.5	0.341	73.0	0.084
-8.0	0869	32	0978	12 0	0 720	32.5	0.201	53.0	0.336	73.5	0.079
-7 5	0.885	34	0976	12 5	0 699	33.0	0.215	53.5	0.331	740	0.075
-7 0	0899	36	0 973	130	0 677	33 5	0.230	5410	0.325	74.5	0.070
-65	0913	38	0 970	135	0 654	34.0	0.243	54.5	0.319	75.0	0.066
-60	0925	40	0 966	140,	0 631	34 5	0.256	55 0	0.313	75.5	0061
-5.5	0937	42	0 963	14 5	0 608	35 0	0.268	55.5	0.307	76 0	0.057
-50	0948	44	0 959	150	0 584	35.5	0.280	56.0	0.301	76 5	0.053
-4.5	0958	'46	0 956	15 5	0 560	36.0	0.291	56 5	0.294	77.0	0.049
-4 0	0966	48	0952	160	0 536	36 5	0.301	57.0	0.288	77.5	0.046
-35	0974	50	0948	165	0511	370	0311	57.5	0.281	78.0	0.042
-30	0981	52	0944	17.0	0.486	37.5	0.320	58.0	0.275	78.5	0.039
-28	0983	54	0939	17.5	0.461	38.0	0.328	58.5	0268	79.0	0 035
-2 6	0986	5.6	0.935	18.0	0.436	'38.5	0.336	59.0	0.261	79.5	0 032
-24	0.988	5.8	0930	185	0411	'390	0343	595	0.254	80 0	0.029
-22	0990	6.0	0.925	19.0	0.385	39.5	0.349	60.0	0.247	80.5	0.026
-20	0992	6.2	0920	19.5	0.360	40.0	0355	60.5	0.240	81.0	0.024
-1 8	0993	64	0915	20.0	0.335	40.5	0.361	61.0	0.233	81.5	0.021
-1 6	0995	6.6	0910	205	0.310	41.0	0.365	61.5	0.226	82.0	0.019
-1 4	0996	68	0905	21 0	0284	41 5	0369	62.0	0.220	82.5	0.016
-1 2	0997	70	0899	21 5	0259	420	0373	625	0.213	83.0	0.014
-1 0	0998	72	0893	220	0234	'425	0376	'630	0 206	83.5	0 012
-08	0999	74	0888	225	0210	430	0378	635	0.199	84.0	0.010
-06	0999	76	0.882	230	0185	435	0380	64.0	0.192	84.5	0.009
-0.4	1000	7.8	0.876	23.5	0 161	44.0	0.382	64.5	0.185	85.0	0.007
-02	1.000	80	0869	24.0,	0.137	44.5	0.383	65.0	0.179	85.5	0.006
0.0	1 000	8.2	0.863	24.5	0 114	45.0	0.383	65 5	0.172	86.0	0.005
0 2	1.000	84	0.857	25.0'	0,090	45.5	0.383	66.0	0.165	86.5	0.004
0 4	1.000	8.6	0.850	25.5'	0.068	46.0	0.382	66.5	0.159	87.0	0.003
0.6	0 999	8.8	0 843	26 0	0.045	46 5	0.382	67.0	0 153	87.5	0.002
0.8	0999	90	0.836	26.5	0023	47.0	0380	675	0.146	88.0	0.001
1 0	0998	92	0829	270	0002	47.5	0.378	68 0	0.140	88.5	0.001
1 2	0997	94	0.822	275	0.020	48.0	0.376	68 5	0.134	89.0	0 000
1 4	0996	96	0815	280	0040	48.5	0.374	69 0	0128	895	0.000
1 6	0995	98	0808	285	0060	49.0	0.371	69 5	0 122	900	0000
1 8	0993	100	0800	290	0.080	-49.5	0.367	70 0	0 116		
20	0.992	10.2	0.793	29.5	0099	50.0	0364	70 5	0.111		
22	0 990	10.4	0.785	30.0	0117	505	0360	71 0	0 105		

Remarks.

ERP - dBk



DIELECTRIC MODEL TF-2HT
RMS GAIN AT MAIN LOBE: 3.42 dB
ELECTRICAL BEAM TILT: 0.0°
NONDIRECTIONAL ANTENNA

KESSLER & GEHMAN
TELECOMMUNICATIONS CONSULTING ENGINEERS
507 N.W. 60th Street, Suite C
Gainesville, Florida 32607

KTOO-DT CHANNEL 10
JUNEAU, ALASKA

20030107 **EXHIBIT 8**

KTOO-DT CHANNEL 10

JUNEAU, ALASKA

AZIMUTH	ERP-dBk	AZIMUTH	ERP-dBk
N000°E	-1.26	N180°E	-1.26
N010°E	-1.55	N190°E	-1.55
N020°E	-2.21	N200°E	-2.21
N030°E	-2.92	N210°E	-2.92
N040°E	-3.26	N220°E	-3.26
N050°E	-3.04	N230°E	-3.04
N060°E	-2.43	N240°E	-2.43
N070°E	-1.80	N250°E	-1.80
N080°E	-1.38	N260°E	-1.38
N090°E	-1.26	N270°E	-1.26
N100°E	-1.55	N280°E	-1.55
N110°E	-2.21	N290°E	-2.21
N120°E	-2.92	N300°E	-2.92
N130°E	-3.26	N310°E	-3.26
N140°E	-3.04	N320°E	-3.04
N150°E	-2.43	N330°E	-2.43
N160°E	-1.80	N340°E	-1.80
N170°E	-1.38	N350°E	-1.38

MINIMUM OF -3.26 dBk

MAXIMUM OF 1.26 dBk

KESSLER & GEHMAN
TELECOMMUNICATIONS CONSULTING ENGINEERS
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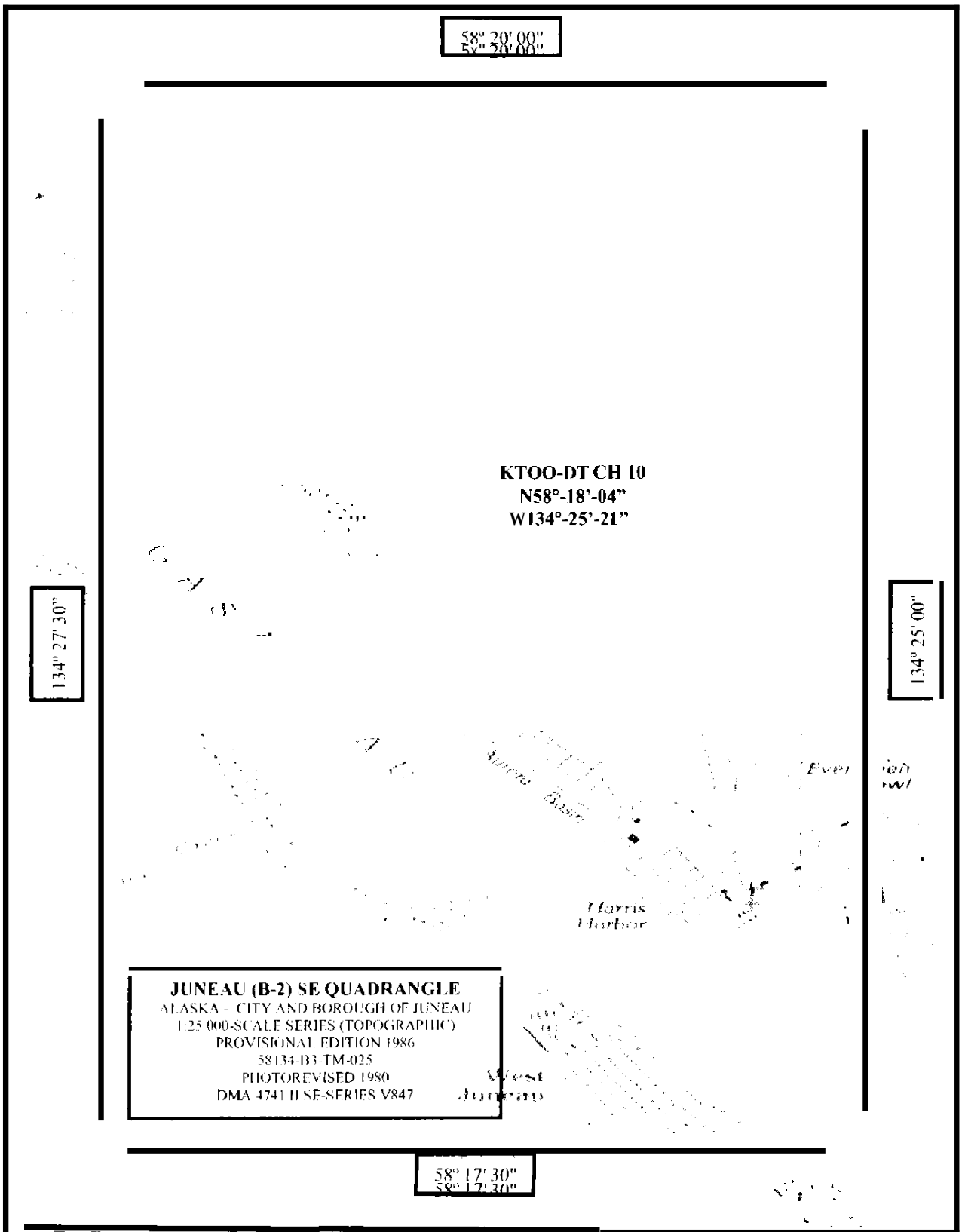
KTOO-DT CHANNEL 10

JUNEAU, ALASKA

20030107

EXHIBIT 9



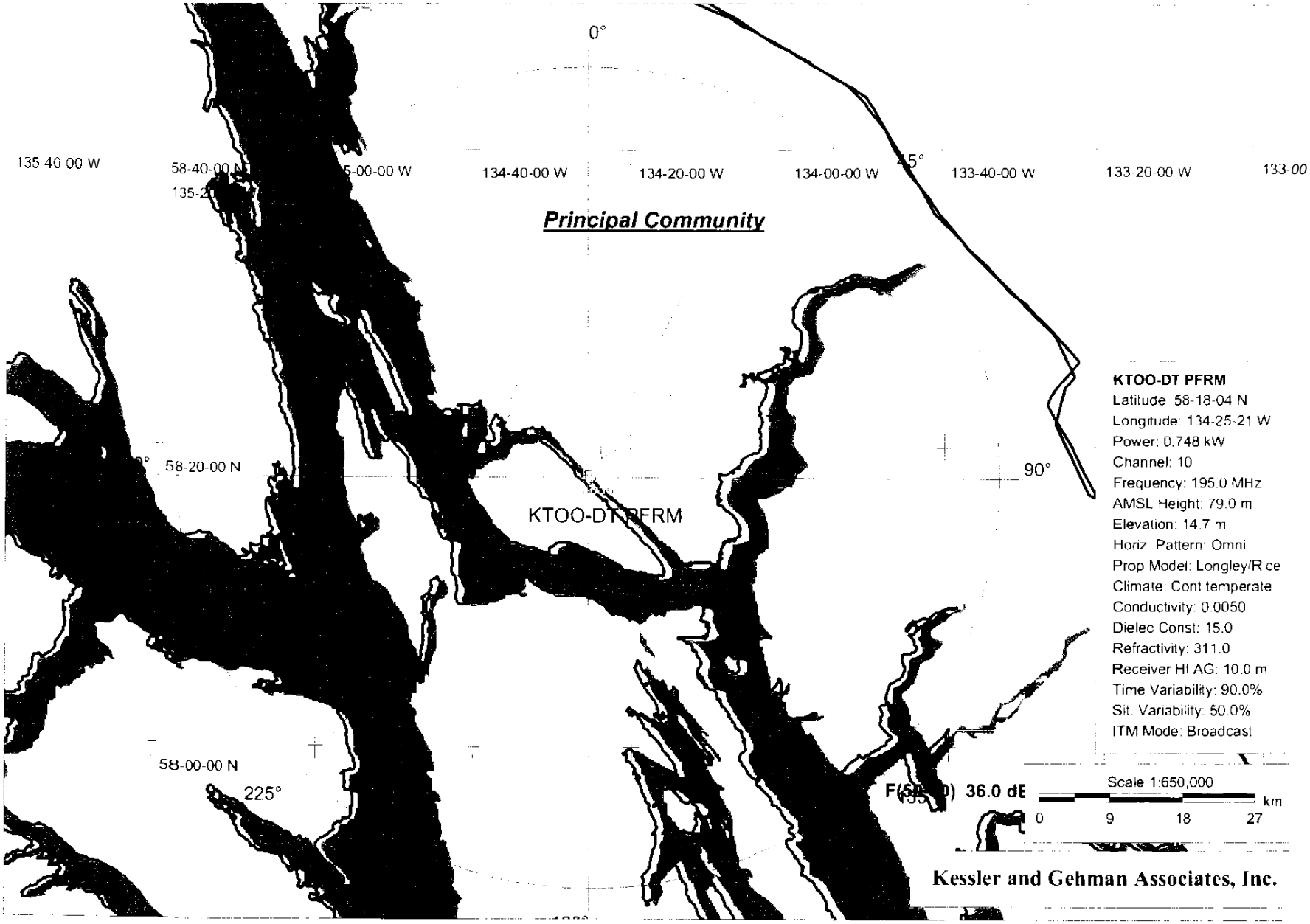
KESSLER & GEHMAN
TELECOMMUNICATIONS CONSULTING ENGINEERS
507 N.W. 60th Street, Suite C
Gainesville, Florida 32607

KTOO-DT CHANNEL 10 PFRM

JUNEAU, ALASKA

20030107

EXHIBIT 10



01/07/2003

Exhibit 11

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 01-07-2003 Time: 11:55:14

Record Selected for Analysis

KTOO-DT CDB +PROPOSED Juneau AK US
Channel 10 ERP 0.748 kW HAAT 00000 m RCAMSL 00079 m
Latitude 058-18- 4 Longitude 0134-25-21
Status Zone Border
Dir Antenna Make CDB Model 000000000000001 Beam tilt N Ref Azimuth 0.0
Last update 00000000 Cutoff date 00000000 Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	0.748	33.0	37.6
45.0	0.748	33.0	37.6
90.0	0.748	33.0	37.6
135.0	0.748	79.0	51.1
180.0	0.748	33.0	37.6
225.0	0.748	33.0	37.6
270.0	0.748	33.0	37.6
315.0	0.748	33.9	37.9

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

No spacing violations found to other full service stations

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountian

Proposed facility is within the Canadian coordination distance
Distance to border = 54.0km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

****

Start of Interference Analysis

Proposed Station

Channel	Call	City/State	ARN	
10	KTOO-DT	Juneau AK	CUR	PROPOSED

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.	
11	KJUD DT	JUNEAU AK	1.1	PLN	DTVPLN	-DTVP0079

%%%

Analysis of Interference to Affected Station 1

DTV Baseline Analysis

Channel	Call	City/State	Application Ref. No.	
11	KJUD-DT	JUNEAU AK	DTVPLN	-DTVP0079

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.

Results for: 11A AK JUNEAU DTVPLN DTVP0079 PLN
HAAT 33.0 m, ATV ERP 3.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	26909	7254.6
not affected by terrain losses	26909	7254.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

NTSC Baseline Analysis

Channel	Call	City/State	Application Ref. No.	
08	KJUD	JUNEAU AK	DTVPLN	-NPLN0516

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.

Results for: 8N AK JUNEAU DTVPLN NPLN0516 PLN

	POPULATION	AREA (sq km)
within Noise Limited Contour	17543	404.5
not affected by terrain losses	17543	404.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to all IX	0	0.0

Analysis of current record

Channel	Call	City/State	Application Ref. No.
11	KJUD-DT	JUNEAU AK	DTVPLN -DTVP0079

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
10	KTOO-DT	Juneau AK	1.1	CUR	-PROPOSED

Proposal causes no interference

##

Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
10	KTOO-DT	Juneau AK	CUR -PROPOSED

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
11	KJUD-DT	JUNEAU AK	1.1	PLN	DTVPLN -DTVP0079

Total scenarios = 1

Result key: 1
Scenario 1 Affected station 2
Before Analysis

Results for: 10A AK Juneau CUR PROPOSED
HAAT 0.0 m, ATV ERP 0.7 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	26747	4952.5
not affected by terrain losses	26747	4952.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interferring Stations Included in above Scenario 1

*Percent Service lost without proposal: 0.0 to CUR PROPOSED
*Percent Service lost with proposal: 0.0 to CUR PROPOSED

##

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

****** KTOO-DT PERM CHANNEL 10 SPACING STUDY ******

Job title: KTOO-DT Channel 10 Spacing Study
Proposed latitude: N 58 14 4.00
Proposed longitude: W 134 25 21.00
Proposed offset: DTV
Proposed zone: 2
Database: 01-07-03
Search: 01-08-03
Proposed Channel: 10 (192 MHz)

CH Call City	Zone	Bearing			
N.Latitude W.Longitude State	Power	HAAT	Dist	FCC	Margin
10o ALLOTM Juneau	AK	2	78.3	0.76	273.6	-272.84
58 18 09 134 24 35	AN	5000 kW	600 M			
Allotment						
10o K10LS Lemon, Etc.	AK	2	7.93	307.9	63.21	-55.28
58 20 41 134 31 46	DXN	0.025 kW	0 M			
Capital Community Broadcasting, Inc. (BLTTV19840508IC)						
10o K10KG Tenakee Springs	AK	2	219.4	219.4	062.79	11.88
57 46 51 135 13 11	DXN	0.013 kW	0 M			
City Of Tenakee Springs (BLTTV4799)						
11 KJUD-D CP Juneau	AK	2	271.7	1.06	< 23.0	21.94
58 18 03 134 26 26	TN	3.2 kW	-321 M			
Smith Television License II (BPCDT19991029ABS)						
09o K09FP Freshwater Bay	AK	2	224.3	62.24	> 6.75	55.49
57 53 57 135 09 21	DXN	0.055 kW	0 M			
State Of Alaska (BLTTL19820928JA)						

****** End of channel 10 study ******

V-Soft Communications Population Report

Kessler and Gehman Associates, Inc. Population Report

KTOO-D.C (10) Juneau, AK
TV Outgoing Interference Study
Signal Resolution: 2 km
Consider NTSC Taboo: Yes
KWX error points are considered to be interference free coverage
# of radials computed for contours: 72
Contours calculated using 8 radial HAAT.
LR Profile Spacing Increment: 1.0 km
Masked interference points are being counted as interference.
Using NTSC lptv/translators D/U rules.

Study Date: 1///2003
TV Database Date: 01-07-03

Population Database: 1990 US Census

Stations Considered:

Call Letters	City	State	Dist	Bear
K09QF (09N)	Angoon	AK	69.6	166.2
K09TP (09N)	Freshwater Bay	AK	62.2	224.3
K09TA (09N)	Eight Fathoms Bight	AK	85.9	247.8
K10IS (10N)	Lemon, Etc.	AK	7.9	307.8
K10KG (10N)	Tenakee Springs	AK	14.7	219.4
KJUD-D.C (11)	Juneau	AK	1.1	271.7

Stations which receive interference:

Call Letters	H Units	Population	Area (sq. km)
K10IS (10N)	1,355	3,662	43.22
K10KG (10N)	0	0	4.00

Totals for KTOO-D.C (10)
Total population to which interference is caused: 3,662
Total number of housing units to which interference is caused: 1,355

KESSLER & GEHMAN
TELECOMMUNICATIONS CONSULTING ENGINEERS
507 N.W. 60th Street, Suite C
Gainesville, Florida 32607

KTOO-DT CHANNEL 10 PFRM

JUNEAU, AK

20030107 EXHIBIT 14

Kessler and Gehman Associates, Inc. Population Report

KJUD-D.C (11) Juneau, AK
TV Incoming Interference Study
Signal Resolution: 2 km
Consider NTSC Taboo: Yes
KWX error points are considered to be interference free coverage.
# of radials computed for contours: 36
Contours calculated using 8 radial HAAT.
LR Profile Spacing Increment: 1.0 km
Interference considered within the reference station's noise limited contour
Using NTSC Dptv/translators D/U rules.
Threshold for reception: 36.0

Study Date: 1/8/2003
TV Database Date: 01-07-03

Population Database: 1990 US Census

Percentages calculated using a baseline population of 26,927.

Stations considered which do not cause interference:

K10IS (10N)
K10KG (10N)
K11QE (11N)
K11RB (11N)
K11RD (11N)
K11RC (11N)
K11QX (11N)
K11RA (11N)
K11QC (11N)
NEW.A (11N)

Call Letters	City	State	Dist	Bear
K10IS (10N)	Lemon, Etc.	AK	7.1	312.9
K10KG (10N)	Tenakee Springs	AK	14.0	218.8
K11QE (11N)	Skagway	AK	138.0	338.8
K11RB (11N)	Whales Pass	AK	257.6	161.3
K11RD (11N)	Kluxwan	AK	125.3	348.4
K11RC (11N)	Thorne Bay	AK	313.6	151.4
K11QX (11N)	Port Protection	AK	225.9	166.9
K11RA (11N)	Klawock	AK	316.6	164.4

K11QC (11N)	Petersburg	4K	192.6	151.9
NEW.A (11N)	Sitka	4K	149.0	200.9

Totals for KJUD-D.C (11)

Calculation Area Population:	26,909	9199.4 sq. km)
Not Affected by Terrain Loss:	26,909	9199.4 sq. km)
Total NTSC Interference:	0	0.0 sq. km)
DTV Only Interference:	0	0.0 sq. km)
Total DTV Interference:	0	0.0 sq. km)
Interfered Population:	0	0.0 sq. km)
Interference Free:	26,909	9199.4 sq. km)
Percent Interference:	0.00	
Terrain Blocked Population:	0	0.0 sq. km)
Contour Area Population:	26.92/	

Kessler and Gehman Associates, Inc. Population Report

KJUD-D.C (11) Juneau, AK
TV Incoming Interference Study
Signal Resolution: 2 km
Consider NTSC Taboo: Yes
KWX error points are considered to be interference free coverage.
# of radials computed for contours: 36
Contours calculated using 8 radial HAAT.
LR Profile Spacing Increment: 1.0 km
Interference considered within the reference station's noise limited contour.
Using NTSC Dptv/translators D/U rules.
Threshold for reception: 36.0

Study Date: 1/8/2003
TV Database Date: 01-07-03

Population Database: 1990 US Census

Percentages calculated using a baseline population of 26,927.

Stations considered which do not cause interference:

K10LS (10N)
K10KG (10N)
K11QE (11N)
K11RB (11N)
K11RD (11N)
K11RC (11N)
K11QX (11N)
K11RA (11N)
K11QC (11N)
NEW.A (11N)
KTOO-D.C (10)

Call Letters	City	State	Dist	Bear
K10LS (10N)	Lemon, Etc.	AK	/.1	312.9
K10KG (10N)	Tenakee Springs	AK	/4.0	216.8
K11QE (11N)	Skagway	AK	138.0	*338.8*
K11RB (11N)	Whales Pass	AK	257.6	161.3
K11RD (11N)	Klukwan	AK	125.3	348.4
K11RC (11N)	Thorne Bay	AK	313.6	157.4
K11QX (11N)	Port Protection	AK	221.9	166.9
K11RA (11N)	Klawock	AK	'16.6	164.4

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KTOO–DT CHANNEL 10 PFRM

JUNEAU.AK

200301OH **EXHIBIT 16**

K11QC (11N)	Petersburg	AK	192.6	151.9
NEW.A (11N)	Sitka	AK	149.0	200.9
KTOO-D.C (10)	Juneau	AK	1.1	91.7

Totals for KJUD-D.C (11)

Calculation Area Population:	26,509	(9199.1	sq. km)
Not Affected by Terrain Loss:	26,909	(9199.4	sq. km)
Total NTSC Interference:	0	0.0	sq. km)
DTV Only Interference:	0	0.0	sq. km)
Total DTV Interference:	0	0.0	sq. km)
Interfered Population:	0	0.0	sq. km)
Interference Free:	26,909	9199.4	sq. km)

Percent Interference: 0.00

Terrain Blocked Population:	0	(0.0 sq. km)
Contour Area Population:	26,927	

KTOO-DT PRFM Spacing Study
Exhibit 17

REFERENCE
58 18 04 N
134 25 21 W

ZONE = ?E DTV

DISPLAY DATES
DATA 01-10-03
SEARCH 01-10-03

Channel 10 , 192 MHz .....

Call / N. Lat.	Channel / W. Lng.	Location	Dist / Power	Azi / HAAT	FCC	Margin
AL358 AL 58 18 09	10Z Juneau 134 24 35	AK AN	0.76 5000.000 kW	78.3 600 M	> 273.60	-272.84
K10LS LI 5ii 20 41	10N Lemon, Etc. 134 31 46 DXN	*AK* Capital Community B/cing.,	7.93 0.025 kW BLTTV19840508IC	307.5 0 M	> 063.21	-55.28
K10KG LI 57 46 51	ION Tenakee Springs 135 13 11 DXN	AK City Of Tenakee Springs	74.67 0.013 kW BLTTV4799	219.4 0 M	> 062.79	11.88
KJUD-D CP 58 18 05	11 Juneau 131 26 26 TN	AK Smith Television License H	1.06 3.200 kW BPCDT19991029ABS	271.7 -321. M	< 23.0 > 110.0	21.94
K09TP LI 57 53 57	09N Freshwater Bay 135 09 21 DXN	AK State Of Alaska	62.24 0.055 kW BLTTL19820928JA	224.3 O M	> 006.75	55.49
K09TA LI 58 00 10	09N Eight Fathoms Bi 1.35 46 03 DXN	AK State Of Alaska	85.89 0.055 kW BLTTV19821118IP	247.8 O M	> 006.75	79.14
K09QF LI 57 30 03	09N Angoon 134 35 00 DXN	AK State Of Alaska	89.64 0.053 kW BLTTL19811117KG	186.2 0 M	> 006.72	82.92
K09RM LI *57* 57 45	05N Pelican 136 13 51 DXN	AK State Of Alaska	113.02 0.054 kW BLTVL19811117JX	251.2 0 M	> 006.73	106.29
K09TK LI 58 11 03	09N Elfin Cove 136 20 35 DXN	AK State Of Alaska	113.55 0.055 kW BLTTV19880617IB	264.2 O M	> 006.75	106.80
K09TB LI 57 24 15	09N Hobart Bay 133 24 31 DXN	AK State Of Alaska	116.64 0.055 kW BLTVL14840123IN	148.5 0 M	> *006.75*	105.89
KOCPD LI 59 14 05	09N Haines 135 27 01 DXN	AK State Of Alaska	119.80 0.013 kW BLTTV19800519IP	330.7 0 M	> 005.68	114.12

Call N. Lat.	Channel W. Lng.	Location	Dist Power	Azi HAAT	FCC	Margin
K11RD LI	11N Klukwan	AK	125.53	347.9	> 006.63	118.91
59 24 08	134 53 07 DXN		0.048 kW	0 M		
State Of Alaska			BLTTV19821207ID			
K11QE LI	11N Skagway	AK	138.46	338.4	> 006.63	131.84
59 27 13	135 19 17 DXN		0.048 kW	0 M		
State Of Alaska			BLTVL19811117JG			
AL754 AL	11Z Whitehorse	YT	263.81	354.5	< 11.0 > 125.0	138.81
60 39 29	134 52 57 AN		5000.000 kW	600 M		
NEW AP	11N Sitka	AK	149.39	201.2	> 009.37	140.02
[illegible] 02 53	135 18 56 XN		0.490 kW	0 M		
Sheldon Jackson College			BNPTVL20000828BFO			
K09QP LI	09N Kake	AK	150.13	168.9	> 006.68	143.45
56 58 39	133 56 47 DXN		0.051 kW	0 M		
State Of Alaska			BLTVL19811117KM			
K09TC LI	09N Rowan Bay	AK	182.57	177.0	> 006.75	175.82
56 39 50	134 16 06 DXN		0.055 kW	0 M		
State Of Alaska			BLTVL19830516IT			
K09OU LI	09N Petersburg	AK	187.51	151.4	> 005.68	181.83
5L 48 53	132 57 05 DXN		0.013 kW	0 M		
Narrows Broadcasting Corpo			BLTTV19800527ID			
K11QC LI	11N Petersburg	AK	192.12	152.3	> 006.61	185.51
Fib 45 58	132 57 33 DXN		0.047 kW	0 M		
Narrows Broadcasting Corpo			BLTTV19850506IC			
K09SY LI	09N Point Baker	AK	222.18	167.1	> 006.77	215.41
56 21 14	133 37 13 DXN		0.056 kW	0 M		
State Of Alaska			BLTTV19821118IL			
K11QX LI	11N Port Protection	AK	225.64	167.2	> 006.75	218.89
56 19 23	133 36 44 DXN		0.055 kW	0 M		
State Of Alaska			BLTVL198401231J			
K09OQ LI	09N Wrangell	AK	239.57	148.4	> 006.78	232.79
56 27 14	132 22 54 DXN		0.057 kW	0 M		
Capital Community B/cing ,			BLTTV19820708ID			
ALK09O AT,	09Z Ketchikan	AK	370.53	151.6	< 11.0 > 125.0	245.53
55 20 35	131 38 38 AN		5000.000 kW	600 M		
Rainbird Comm. B/c Corpora						
K11RB LI	11N Whales Pass	AK	257.24	161.5	> 006.75	250.49
56 06 13	133 06 40 DXN		0.055 kW	0 M		
State Of Alaska			BLTTV19821203IS			

Call	Channel	Location	Dist	Azi	FCC	Margin
N. Lat.	W. Lng.		Power	HAAT		
K09NP LI	09N	Cape Pole	AK 262.85	171.4	> 005.68	251.17
55 57 57	133 47 33	DXN	0.013 kW	0 M		
Southeast Island School Di			BLTTV4900			
K09TV LI	09N	Coffman Cove	AK 273.36	158.8	> 006.75	266.61
56 00 09	132 50 17	DXN	0.055 kW	0 M		
State Of Alaska			BLTVL19830307IC			
K09TJ LI	09N	Naukati Bay	AK 280.60	164.4	> 006.75	273.85
55 52 06	133 13 03	DXN	0.055 kW	0 M		
State Of Alaska			BLTVL19821012IP			
K09TL LI	09N	Port Alice	AK 283.14	169.4	> 006.75	276.39
55 47 59	133 35 13	DXN	0.055 kW	0 M		
State Of Alaska			BLTVL19820916IB			
K11RC LI	11N	Thoine Bay	AK 313.20	157.7	> 006.75	306.45
55 41 08	132 31 42	DXN	0.055 kW	0 M		
State Of Alaska			BLTTV19831202ID			
K09TI LI	09N	Meyers Chuck	AK 314.05	154.3	> 006.75	307.30
55 44 23	132 15 14	DXN	0.055 kW	0 M		
State Of Alaska			BLTVL19840403IA			
K11RA LI	11N	Klawock	AK 316.30	164.7	> 006.75	309.55
55 33 18	133 05 45	DXN	0.055 kW	0 M		
State Of Alaska			BLTTV19840516IB			
CH2371 LI	10Z	Stewart	BC 375.83	132.6	> 062.63	313.20
55 56 22	129 59 20	XN	0.010 kW	0 M		
K09SM LI	09N	Kasaan	AK 331.21	157.4	> 006.77	324.44
55 32 24	132 24 04	DXN	0.056 kW	0 M		
State Of Alaska			BLTVL19831121IB			
K09UA LI	09N	Yakutat	AK 335.41	296.7	> 006.57	328.84
59 32 39	139 43 32	DXN	0.045 kW	0 M		
State Of Alaska			BLTVL19860320IA			

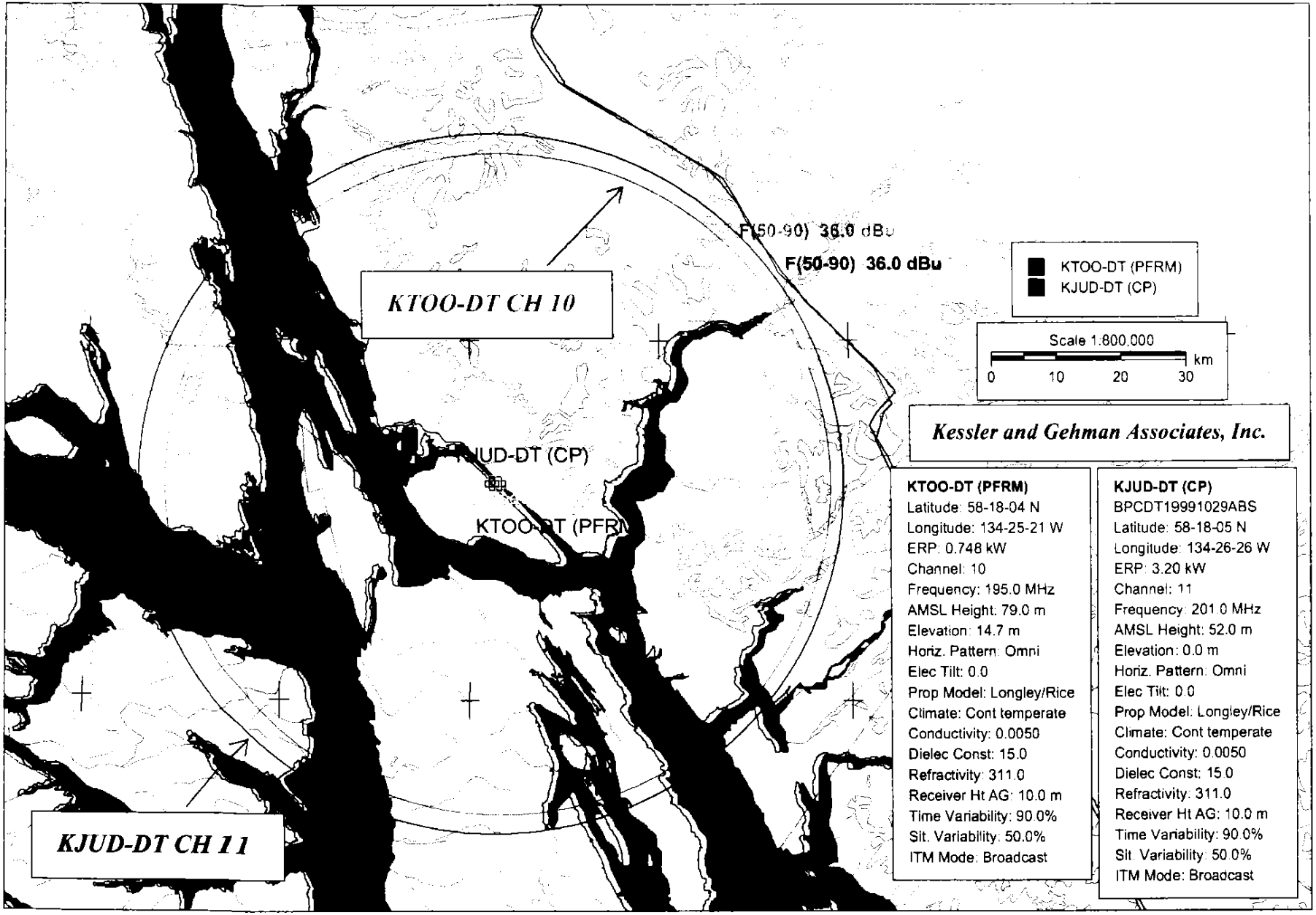
F(50-90) 36.0 dBu
F(50-90) 36.0 dBu
KTOO-DT CH 10
KJUD-DT (CP)
KTOO-DT (PFRM)
KJUD-DT CH 11
KTOO-DT (PFRM)
KJUD-DT (CP)
Scale 1:800,000
km
0
10
20
30
Kessler and Gehman Associates, Inc.
KTOO-DT (PFRM)
Latitude: 58-18-04 N
Longitude: 134-25-21 W
ERP: 0.748 kW
Channel: 10
Frequency: 195.0 MHz
AMSL Height: 79.0 m
Elevation: 14.7 m
Horiz. Pattern: Omni
Elec Tilt: 0.0
Prop Model: Longley/Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 311.0
Receiver Ht AG: 10.0 m
Time Variability: 90.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast
KJUD-DT (CP)
BPCDT19991029ABS
Latitude: 58-18-05 N
Longitude: 134-26-26 W
ERP: 3.20 kW
Channel: 11
Frequency: 201.0 MHz
AMSL Height: 52.0 m
Elevation: 0.0 m
Horiz. Pattern: Omni
Elec Tilt: 0.0
Prop Model: Longley/Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 311.0
Receiver Ht AG: 10.0 m
Time Variability: 90.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast

Exhibit 18

KTOO-DT CP Spacing Study
Exhibit 19

REFERENCE
58 18 04 N
134 25 21 W

ZONE = 2E DTV

DISPLAY DATES
DATA 01-10-03
SEARCH 01-10-03

..... Channel 6 , 76 MHz .....

Call	Channel	Location	Dist	Azi	FCC	Margin
N. Lat.	W. Lng.	Power		HAAT		
KTOO-D CP	06	Juneau	AK	0.00	0.0 > 273.60	-273.60
58 18 04	134 25 21	TN	0.748 kW		-324 M	
Capital Community Broadcas			BPEDT20000427ACM			
K06JZ LI	06N	Mendenhall Valle	AK	14.29	300.4 > 088.07	-13.78
58 21 57	134 37 59	DXN	0.047 kW		0 M	
Capital Community B/cing,			BLTTV19810706IZ			
NEW LI	06Z	Whitehorse	YT	264.00	354.5 > 273.60	-9.60
60 34 35	134 52 56	VN	0.300 kW		380 M	
KATH-L LI	05N	Juneau-douglas	AK	0.75	68.3 > 007.93	-7.18
58 18 13	134 24 38	DXN	0.053 kW		0 M	
Dan Etulain			BLTVL19940328JE			